

4. (amended) A polypeptide variant as recited in claim 1, characterized in said oligopeptide is added to the N-terminus and/or inserted into the N-terminal region, and/or substitutes a part of the N-terminal region.

5. (amended) A polypeptide variant as recited in claim 1, characterized in that the amino acid sequence of said polypeptide variant further contains a sequence of relevance to recombinant expression at the N-terminus, said sequence of relevance to recombinant expression being M or MZ, where M stands for methionine and Z stands for one or more amino acids.

6. (amended) A polypeptide variant as recited in claim 1, characterized in that said polypeptide variant further contains a His-tag.

7. (amended) A polypeptide variant as recited in claim 1, characterized in that said polypeptide is altered by addition, substitution, insertion, inversion, and/or deletion, where said polypeptide altered by addition substitution, insertion, inversion and/or deletion shows at least 10% of the biological activity of the unaltered polypeptide, and/or at least 50% homology to the unaltered polypeptide.

8. (amended) A polypeptide variant as recited in claim 1, characterized in that said polypeptide is BMP-2, BMP-4, BMP-5, BMP-6, BMP-7/OP-1, or BMP-8/OP-2.

9. (amended) A polypeptide variant as recited in claim 1, characterized in that said oligopeptide is inserted before the cysteine knot.

10. (amended) A polypeptide variant as recited in claim 8, characterized in that said polypeptide variant has the amino acid sequence SEQ ID NO:5 (T3) or SEQ ID NO:6 (T4).

11. (amended) A polypeptide variant as recited in claim 1 characterized in that said polypeptide variant is a polymer, oligomer, or dimer of said polypeptide variant as recited in any one of claims 1 to 10.

12. (amended) A nucleic acid molecule, comprising a nucleic acid sequence encoding a polypeptide variant as recited in claim 1.

14. (amended) A nucleic acid molecule as recited in claim 12, further comprising a promoter suited to control expression, wherein said nucleic acid sequence encoding a polypeptide variant is under the control of said promoter.

15. (amended) A nucleic acid molecule as recited in claim 12, wherein said nucleic acid molecule contains at least part of a vector.

16. (amended) Host cell, containing a nucleic acid molecule as recited in claim 12 wherein said host cell is a prokaryotic or eukaryotic cell suitable for expression of said nucleic acid molecule.

17. (amended) A process for producing a polypeptide variant with increased heparin-binding ability as recited in claim 1, comprising:
addition to the amino acid sequence of a polypeptide of at least one oligopeptide containing an amino acid sequence selected from SEQ ID NO:1 or SEQ ID NO:2; and/or
insertion into the amino acid sequence of a polypeptide of at least one oligopeptide containing an amino acid sequence selected from SEQ ID NO:1 or SEQ ID NO:2; and/or
substitution of at least one oligopeptide sequence naturally occurring within the amino acid sequence of a polypeptide by one oligopeptide containing an amino acid sequence selected from SEQ ID NO:1 or SEQ ID NO:2.

19. (amended) A process as recited in claim claim 17, characterized in that said process comprises gene technological processes.

20. (amended) A process as recited in claim 17, characterized in that said process comprises:

- a) in vitro mutagenesis of a nucleic acid encoding a polypeptide, so that
 - (i) to the nucleic acid encoding said polypeptide is added at least one nucleic acid encoding an oligopeptide containing an amino acid sequence that is selected from SEQ ID NO:1 or SEQ ID NO:2; and/or

- (ii) into the nucleic acid encoding said polypeptide is inserted at least one nucleic acid encoding an oligopeptide containing an amino acid sequence that is selected from SEQ ID NO:1 or REQ ID NO:2; and/or
- (iii) at least one nucleic acid sequence naturally occurring within the nucleic acid sequence encoding said polypeptide is substituted by a nucleic acid sequence encoding an oligopeptide containing an amino acid sequence selected from SEQ ID NO:1 or SEQ ID NO:2;
- b) cloning of the mutated nucleic acid into a suitable expression vector;
- c) transformation/transfection of a suitable host cell with the expression vector obtained;
- d) cultivation of said transformed/transfected host cell under conditions suitable for expression;
- e) isolation, and if necessary renaturation, of the expressed polypeptide variant.

21. (amended) A process as recited in claim 17, characterized in that said process is carried out within a prokaryotic host cell such as preferably E. coli.

22. (amended) A process as recited in claim 17, characterized in that said process is carried out within a eukaryotic cell, preferably a yeast, plant or insect cell, CHO or COS cell.

23. (amended) A pharmaceutical composition, comprising a polypeptide variant as recited in claim 1 and, optionally, physiologically compatible additives.

24. (amended) Use of a polypeptide variant as recited in claim 1 to stimulate osteogenesis or wound healing, or to treat inflammation or cancer.

25. (amended) A composition for osteoinduction, comprising a polypeptide variant as recited in claim 1 and a carrier selected from among heparin, hydroxyapatite, hyaluronic acid, synthetic polymers, and collagen.

26. (amended) An osteoinductive matrix, characterized in that said matrix contains or is coated with heparin or heparin-like substances and polypeptide variants as recited in claim 1 are adsorbed to said heparin or heparin-like substances.